

# Getting Started as a Developer

Welcome to the world of OpenMRS development! This page introduces you to the things you'll need to get started on your journey.

Your first step when getting started as a developer should be to look through our [Developer Manual \(PDF\)](#). This book will give you all the information you need to get started as an OpenMRS developer in an easy to read and concise format.

Once you've read through the Developer Manual, here's a quick summary of things you can do to get started:

1. **Create an OpenMRS ID.** Your OpenMRS ID defines your username in the OpenMRS community and provides access to community resources, like this wiki, our issues tracker, and the OpenMRS Talk forums.
2. **Create a new case at OpenMRS Helpdesk** stating you'd like to contribute and would like edit access to Wiki and JIRA. Because of spammers, we must require this extra step before you can edit wiki pages or make any changes to JIRA tickets.
3. **Create a GitHub account** if you don't have one.
4. **Join discussions at OpenMRS Talk.** Be sure to add your GitHub username to your settings in Talk, then [introduce yourself to the community](#). You can learn more about how to use Talk by reading this [introduction](#) and [FAQ](#).
5. **Set up your development environment.** Follow the [Step-by-Step Installation for Developers](#) and [How-To Setup And Use Your IDE](#). The Developer's Manual also has a helpful chapter on [Setting Up Your Development Environment](#).
6. Download and install the [OpenMRS SDK](#).
7. Watch some OpenMRS [development screencasts on YouTube](#).
8. **Create your first OpenMRS module.** The Developer's Manual features a chapter on how to create a [Hello World Module](#).
9. **Claim an Issue.** Review community priorities and introductory issues below to find an issue of interest to you that is ready for work, claim it, and make your first contribution. If you need any clarification on the issue, use [OpenMRS Talk](#) or join [IRC](#) for real-time interaction. If you find yourself taking long (days) without making any progress, feel free to un-assign yourself from the issue and choose another.
10. **Meet some other developers** through real-time chat in Telegram ([telegram.me/openmrs](#)) or IRC ([irc.openmrs.org](#)).
11. **Learn about OpenMRS Developer Stages**, earn the [/dev/null badge](#) and, when you're ready, [take the quiz to earn /dev/1](#).
12. Try as much as you can to **include unit tests for your changes**. Remember to also do an "mvn clean install" to ensure that all existing unit tests and yours pass. Then create a pull request. If your changes affect the user interface, please run the web application to see the effects, and then attach a screenshot, before you commit. Remember to have a look at the [Pull Request Tips](#).
13. **When you complete work on an issue**, log your time spent on that issue and click "Request Code Review" and another developer will get you some feedback in short order.
14. **Read about Using Git.** This is especially useful if you join a sprint or choose to share your module (we hope you do).
15. **Avoid staying assigned to issues you aren't actively working on.** When you no longer want to work on an issue that you have already assigned to yourself, please remember to un-assign yourself from it such that others can take it up. If you have any findings that you feel would be useful to whoever takes it up, please feel free to add a comment.
16. **Do some code reviews.** Here is the [list of pull requests](#) that are waiting for review. Reviewing other people's work is one of the great ways of learning about OpenMRS. You can even review code for some one more experienced than you. Reviews can be as simple as checking to ensure that commits are squashed into one, adherence to our [code conventions](#), finding spelling mistakes, or pointing out missing JavaDoc comments. More details about code reviews can be found at this [wiki page](#).
17. **Review Unassigned Projects** if you want to find a larger project to work on.



## For GSOC 2020 Aspirants

Are you interested in GSOC 2020? Start here [Summer Of Code 2020](#).



Are you stuck or not sure where to start? Specific technical questions can be asked at [om.rs/ask](#). For real time interaction, join our developers in Telegram ([telegram.me/openmrs](#)) or IRC ([irc.openmrs.org](#)). Who knew saving lives with code could be this fun? Come join us!

**Share your experience**

New developers, please share your experiences (good or bad) on [this page](#). We are always trying to find ways to improve where we can do better and reinforce things we are doing well, so getting input from your perspective is very helpful & appreciated.

## Community Priorities

Here is a list of tickets prioritized by the community from the [Community Priority Kanban](#):

Key	Summary	T	Created	Updated	Due	Assignee	Reporter	P	Status	Resolution
<a href="#">TRUN K-5344</a>	<a href="#">Module Class Loader Doesn't Allow Unrelated Modules to Have the Same Library</a>		2018-02-14	2020-01-08		Unassigned	Steve McKee		READY FOR WORK	Unresolved
<a href="#">HTML-650</a>	<a href="#">The HTML Form ExitFromCare tag doesn't work in the 2.x UI</a>		2016-11-08	2019-12-05		Unassigned	Jeremy Ogembo		READY FOR WORK	Unresolved
<a href="#">TRUN K-5022</a>	<a href="#">Our spring MVC configuration treats everything after the dot as a file extension, even for things like web services</a>		2017-02-01	2020-03-16		Unassigned	Darius Jazayeri		READY FOR WORK	Unresolved
<a href="#">REST WS-648</a>	<a href="#">JSON Web Tokens Authentication</a>		2017-03-20	2020-03-06		Unassigned	Vincent Tuwei		READY FOR WORK	Unresolved
<a href="#">RA-1359</a>	<a href="#">Enable Dashboard Widgets to be created in other modules</a>		2017-05-10	2019-04-29		Unassigned	Stephen Senkomago Musoke		WAITING FOR DEV	Unresolved
<a href="#">SYNCT -330</a>	<a href="#">Open Sync Message in a Popup Window</a>		2019-05-10	2019-12-02		Mark Mulondo	Stephen Senkomago Musoke		READY FOR WORK	Unresolved
<a href="#">SYNCT -329</a>	<a href="#">Add a Sync Progress Page</a>		2019-05-10	2019-12-31		Unassigned	Stephen Senkomago Musoke		READY FOR WORK	Unresolved
<a href="#">SYNCT -328</a>	<a href="#">Additional Filter Options for Audit Log</a>		2019-05-10	2019-07-30		Unassigned	Stephen Senkomago Musoke		READY FOR WORK	Unresolved
<a href="#">SYNCT -333</a>	<a href="#">Provide an option to ignore some identifiers</a>		2019-07-16	2019-10-24		Unassigned	Stephen Senkomago Musoke		READY FOR WORK	Unresolved
<a href="#">SYNCT -334</a>	<a href="#">OpenMRS ID - which is auto generated does not work when sync happens</a>		2019-07-19	2019-10-24		Unassigned	Stephen Senkomago Musoke		READY FOR WORK	Unresolved
<a href="#">RA-1716</a>	<a href="#">Patient Appointment is shown empty</a>		2020-03-09	2020-03-16		Unassigned	Sharif Magembe		WAITING FOR DEV	Unresolved
<a href="#">REPO RT-862</a>	<a href="#">Create an HttpReportProcessor</a>		2020-03-31	2020-03-31		Unassigned	Daniel Kayiwa		READY FOR WORK	Unresolved

[12 issues](#)

## Introductory Issues

The following issues are both "introductory" and also "curated", meaning that they have thorough descriptions of how to approach solving them:

T	Key	Summary
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	TRUNK-5721	Complex obs valueComplex should be more robust to String#split
	TRUNK-5656	Infinite recursive loop because method calls itself instead of delegate
	TRUNK-5466	Visit Locations in core domain model
	TRUNK-5451	Exclusion of voided Memberships
	TRUNK-5387	Allow for a distribution to override i18n messages during the installation/upgrade wizard
	TRUNK-5234	API Should Set the Concept for Non Coded Drug Orders
	TRUNK-5115	Replace use of conditional logging with slf4j parametrized messages
	SYNC-285	Cannot download database from parent during child server setup
	STAND-77	liquibase-demo-data.xml was not updated after changes made to tables
	REPORT-862	Create an HttpReportProcessor
	LUI-157	Add the ability to manually run a task from the scheduler interface
	LUI-55	Error adding a ConvSet in a second form schema

[12 issues](#)

If you aren't able to find an appropriate issue in the list above, you can take a look at the [complete list of "introductory" issues](#), (not necessarily "curated").

## Beyond Introductory Issues

You could also do code reviews for [pull requests](#).

If you try out the sprint, code reviews, and still find it boring, please feel free to ask us on [IRC](#) or the developers [mailing list](#).

## Current Sprint Issues

We may have an ongoing [Development Sprints](#). Feel free to ask on [IRC](#) or the development category of [OpenMRS Talk](#).

## Other Useful Resources

- [Conventions](#)
- [Code Review](#)
- [Code Review Checklist](#)
- [Simple Secure Coding Checklist](#)
- [Newbie Guide to OpenMRS Development](#) - by Sri Maurya Kummamuru
- <http://stackoverflow.com/help/how-to-ask>
- <http://www.catb.org/~esr/faqs/smart-questions.html>
- [How to send a good PR to the OpenMRS ?—?A complete work flow](#) by Jeyasumangala Rasanayagam